State Water Resources Control Board

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INDIAN WELLS VALLEY GROUNDWATER SUSTAINABILITY PLAN, GROUNDWATER BASIN NO. 6-054

Provided for your consideration are comments submitted on behalf of the State Water Resources Control Board (State Water Board) by the State Water Board's Groundwater Management Program in support of the Department of Water Resources' (DWR) review of the Groundwater Sustainability Plan (GSP) for the Indian Wells Valley Groundwater Basin (basin). The State Water Board recognizes that DWR will determine the adequacy of the GSP, and these comments are intended to support DWR's review by providing the State Water Board's additional expertise and regulatory experience with regard to GSPs. In preparing comments, the Groundwater Management Program has consulted the State Water Board's Division of Water Rights and Division of Drinking Water as well as the appropriate Regional Water Quality Control Board to seek local information and programmatic concerns.

The State Water Board's comments on the GSP relate to the following areas:

- Groundwater Levels and Potential Drinking Water Impacts
- Groundwater Storage
- Groundwater Quality
- Water Budget
- Other Potential Drinking Water Impacts
- Engagement

Groundwater Levels and Potential Drinking Water Impacts

1. The GSP includes a shallow well impact analysis to define significant and unreasonable chronic lowering of groundwater levels. With implementation of proposed projects and management actions, the GSP estimates that 22 shallow supply wells would be impacted by decreasing groundwater levels while the basin is brought into balance between 2020 and 2040. To address impacted

shallow wells, the GSP includes a plan to develop a Well Mitigation Program. Specific actions listed for shallow well mitigation include well deepening, well replacement or connecting properties to existing water supply systems. The Well Mitigation Program will directly benefit beneficial users that unreasonably experience water supply hardships, some of whom are expected to be members of disadvantaged communities. Given the likelihood of impacts to shallow water supply wells during the implementation of the GSP, State Water Board staff appreciate and support the inclusion of the planned Well Mitigation Program in the GSP.

Groundwater Storage

2. The GSP sets the minimum threshold for groundwater storage at the simulated estimated value of groundwater in storage in the year 2070 after the projects and management actions have been successfully implemented (Scenario 6.2), plus an additional 10 percent buffer. While the loss of storage is projected to slow over time, it appears that the GSP allows for some continuing loss of groundwater storage past the year 2040 when the basin is expected to reach sustainability. While this is concerning, the GSP notes that there is still some uncertainty in the water budget due to aquifer heterogeneity, insufficient number of wells in some areas, major faults, uncertainty in migration of saline water with deeper pumping, compaction of dewatered clay layers and, uncertainty of project implementation schedules. Staff recommend that the Groundwater Sustainability Agency (GSA) update the storage loss calculations and groundwater storage minimum thresholds as more data become available and the model is further refined.

Groundwater Quality

3. The GSP establishes two separate minimum thresholds for total dissolved solids: 500 milligrams per liter (mg/L) for areas that are considered to have good water quality and 600 mg/L for poorer water quality areas. These areas are generally described in the text but additional details such as specific monitoring points for these two area designations need to be indicated in tables and on maps.

4. The GSP recognizes arsenic as a significant water quality constituent of concern within the basin; however, no monitoring or sustainable management criteria (SMC) were developed for arsenic. The GSA should develop monitoring and SMC for arsenic since projects and management actions could affect arsenic concentrations and distribution within the basin.

    a. In deciding which water quality constituents to consider when setting SMC, a GSA should consider the best available water quality information for the basin, including data used to develop the hydrogeologic conceptual model, geochemistry of geological formations (for the potential of mobilization of natural constituents), and groundwater uses in the vicinity of the representative monitoring sites and the basin as a whole when determining which constituents to evaluate for minimum thresholds. Different constituents may cause undesirable degradation of water quality

in different areas based on the purposes for which groundwater is beneficially used. Not all water quality impacts to groundwater must be addressed in the GSP but significant and unreasonable water quality degradation due to groundwater conditions occurring throughout the basin, and that were not present prior to January 1, 2015, must be addressed in the GSP's minimum thresholds. Both groundwater extraction and the implementation of projects to achieve sustainability may cause impacts from migration of contaminant plumes, changes in the concentration of contaminants due to reduction in the volume of water stored in the basin, or release of harmful naturally occurring constituents. A GSA should particularly consider whether any groundwater quality constituents in the basin may impact the state's policy of protecting the right of every human being to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes (Water Code Section 106.3). Coordination by the GSA with agencies that oversee the remediation of existing groundwater contamination is highly recommended, both in setting minimum thresholds and developing a plan of implementation.

5. In a June 3, 2020, letter reviewing the final GSP, the Lahontan Regional Water Quality Control Board (Lahontan Water Board) commented that the Salt and Nutrient Management Plan model for the basin needed to be updated to account for leaching of salt sources from native soils by recharge of imported water. In addition, the Lahontan Water Board commented that the GSP does not include water quality data for any proposed sources of imported water. The Lahontan Water Board further commented that the GSP should, at a minimum, clarify how water quality will be evaluated for imported water projects and monitored during GSP implementation to ensure that undesirable results do not occur. Based on discussions with Lahontan Water Board and State Water Board Division of Drinking Water staff, State Board staff further recommend that recharge projects be designed to minimize potential water quality impacts such as by avoiding areas with septic tanks and considering existing groundwater contaminants.

Water Budget

6. The GSP should better explain the evapotranspiration trend and components used in the water budget. Model documentation indicates that basin evapotranspiration is focused in the China Lake Playa area, where shallow groundwater levels support phreatophyte vegetation. The GSP does not explain why projected future evapotranspiration would decrease significantly over time in the water budget.

7. The GSP states that it does not assume any precipitation changes related to climate change in its modeled future scenarios. Per 23 CCR Section 354.18 (e), "each [GSP] shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface

water interaction, and subsurface groundwater flow." Board staff recommend expanding the discussion of the range in climate predictions and uncertainty in the water budget (e.g., mountain front recharge volumes).

8. Domestic and municipal uses, including at the Naval Air Weapons Station China Lake and by Navy personnel living outside of the base, constitute the bulk of the future planned groundwater pumping within the sustainable yield of the basin. The GSP assumes that pumping by the Indian Wells Valley Water District (IWVWD) will increase by 1% annually, but does not provide data to support this assumption nor explain the assumptions for the growth of domestic and municipal use outside of the IWVWD service area.

Other Potential Drinking Water Impacts

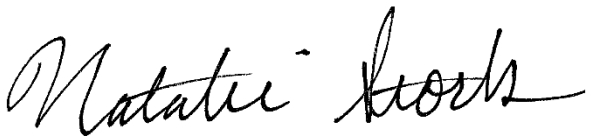
9. The Searles Domestic Water Company sources all of its water supply from wells located within the basin to serve municipal domestic water users located outside of the basin in the nearby Searles Valley communities of Trona, Westend, Argus, and Pioneer Point. It is Board staff's understanding that the water supply for Searles Valley was historically developed within the basin because Searles Valley does not contain potable sources of surface water or groundwater. The Searles Valley is classified as a Severely Disadvantaged Community based on 2018 statewide median household income data. Board staff are concerned that implementation of the GSP may have unintended or unexpected negative impacts on the ability for domestic water users in Searles Valley to access safe, clean and affordable drinking water supplies.

Engagement

10. The GSP includes minimal discussion of tribal engagement or the impacts of the plan on Native American communities. The Communication and Engagement Plan (Appendix 1-E) included a requirement for notice to eight Tribes and Native American organizations; however, any feedback from those entities is not addressed in the plan. One comment letter from the Lone Pine Paiute-Shoshone Reservation, located outside of the basin, was submitted to the GSA on the draft GSP. Without additional information, it is difficult to discern whether the GSA appropriately considered the interests of California Native American Tribes in developing the GSP (Cal. Water Code, §10723.2(h)). The GSP should elaborate on the GSA's tribal engagement effort. If the GSA has not already done so, the GSA can consult with the Native American Heritage Commission (NAHC) to obtain information about Tribes that have current and ancestral ties in the basin. To request this information, the GSA can email the NAHC at nahc@nahc.ca.gov.

If you any have questions regarding these comments, please do not hesitate to contact State Water Board Groundwater Management Program staff by email at SGMA@waterboards.ca.gov or by phone at 916-322-6508.

Sincerely,



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